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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,317	07/13/2001	Ralph A. Tripp	6395-59041	2319

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EXAMINER	
VANDERVEGT, FRANCOIS P	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/889,317	TRIPP ET AL.	
	Examiner	Art Unit	
	F. Pierre VanderVegt	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,9,13,14,19-23,27,31,32 and 37-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,9,13,14,19-23,27,31,32 and 37-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This application is a rule 371 continuation of PCT Serial Number PCT/US00/01032, which claims the benefit of the filing date of provisional application 60/116,835.

Claims 6-8, 10-12, 15-18, 24-26, 29, 30 and 33-36 have been canceled.

New claims 37-44 have been added.

Claims 1-5, 9, 13, 14, 19-23, 27, 31, 32 and 37-44 are currently pending and are the subject of examination in the present Office Action.

1. Applicant filed a preliminary amendment on July 13, 2001 canceling claims 6-8, 10-12, 15-18, 24-26, 29, 30 and 33-36 and adding new claims 37-44. The Office Action mailed September 22, 2004 did not address the claims as presented in the preliminary amendment.

Accordingly, the **Office Action mailed September 22, 2004 is hereby VACATED** and replaced with the present NON-FINAL Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-3, 5, 13, 14, 19-21, 23, 31, 32, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudlacz et al (Eur. J. Pharmacol. [1994] 270:291-300; U on form PTO-892 mailed 9/22/2004) in view of Jafarian et al (Life Sciences [1995] 57(2):143-153; V on form PTO-892 mailed 9/22/2004).

The claims read upon the treatment of viral infections with anti-substance P antibodies. It has long been known in the art that severe viral respiratory infections cause inflammation and airway

hyperresponsiveness, as such severe infections are commonly treated with anti-inflammatory medicaments to treat the symptoms of inflammation in the respiratory tract.

Kudlacz teaches that parainfluenza virus infection of the respiratory tract results in substance P release, hyperresponsiveness and inflammation (see entire document, Abstract, paragraph bridging pages 291-292 and page 298, column 2 in particular). Kudlacz further teaches that in conditions associated with inflammation, such as asthma, tissue substance P levels have been shown to be reduced and levels in local fluids are increased, suggesting release of substance P at the inflammatory focus (paragraph bridging pages 291-292 in particular) and the direct involvement of substance P in inflammation and hyperresponsiveness.

Jafarian teaches that administration of rat monoclonal anti-substance P antibody in a guinea-pig model of asthma "prevents" substance P-induced bronchospams (Abstract in particular). Jafarian teaches the administration of anti-substance P antibodies 30 minutes prior to the administration of exogenous substance P to the animals in a model of asthma.

It would have been prima facie obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Kudlacz and Jafarian to treat viral induced airway inflammation and hyperresponsiveness by administration of anti-substance P antibodies. One would have been motivated to combine the teachings with a reasonable expectation of success by the teachings of Kudlacz that viral infection of the lung results in hyperresponsiveness and inflammation related to substance P levels and the teachings of Jafarian that antibody to substance P is effective in treating and preventing inflammation and hyperresponsiveness in the respiratory tract.

Claims 13, 14, 31 and 32 are included because, while the references do not specifically teach a daily dosage of antibody within the recited range, silence about a particular property does not necessarily constitute its absence and dosages of medicaments are determinable by routine experimentation by the artisan.

Claims 41 and 42 are included because, while Kudlacz and Jafarian are silent about reduction of levels of intracellular cytokines including IL-2, IL-4, IL-6 or IFNγ, silence about a particular property does not constitute its absence. The method of treatment is the same and application of anti-Substance P antibodies for reducing inflammation will also reduce the levels of inflammatory cytokines. The office does not have the facilities and resources to provide the factual evidence needed in order to establish that there is a difference between the materials, i.e., that the claims are directed to new materials and that such a difference would have been considered unexpected by one of ordinary skill in the art, that is, the claimed subject matter, if new, is unobvious. In the absence of evidence to the contrary, the burden is on

the Applicant to prove that the claimed materials are different from those taught by the prior art and to establish patentable differences. See *In re* Best 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and *Ex parte* Gray 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989).

3. Claims 1-5, 13, 14, 19-23, and 31, 32, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudlacz et al (Eur. J. Pharmacol. [1994] 270:291-300; U on form PTO-892 mailed 9/22/2004) in view of Jafarian et al (Life Sciences [1995] 57(2):143-153; V on form PTO-892 mailed 9/22/2004) and Larsen (Clin. Resp. Physiol. [1986] 22(suppl. 7):35-37; W on form PTO-892 mailed 9/22/2004).

Kudlacz and Jafarian have been discussed supra.

The combined references do not teach respiratory syncytial virus.

Larsen teaches that 'insults' to the bronchial airways result in inflammation and hyperresponsiveness. Larsen teaches that such insults include infection of the airway by respiratory syncytial virus (Abstract in particular).

It would have been prima facie obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of the references to treat substance P mediated inflammatory responses to respiratory syncytial virus. One would have been motivated to combine the teachings with a reasonable expectation of success by the teachings of Kudlacz that viral infection of the lung results in hyperresponsiveness and inflammation related to substance P levels and the teachings of Larsen that respiratory syncytial virus infection of the bronchial airways causes inflammation and hyperresponsiveness. One would have been further motivated to treat viral inflammation in the respiratory tract with anti-substance P antibodies by the teachings of Jafarian that antibody to substance P is effective in treating and preventing inflammation and hyperresponsiveness in the respiratory tract.

4. Claims 1-5, 9, 13, 14, 19-23, 27, 31, 32, 37, 38, 41, 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudlacz et al (Eur. J. Pharmacol. [1994] 270:291-300; U on form PTO-892 mailed 9/22/2004) in view of Jafarian et al (Life Sciences [1995] 57(2):143-153; V on form PTO-892 mailed 9/22/2004) and U.S. Patent No. 5,256,766 to Coughlin (A on form PTO-892 mailed 9/22/2004).

Kudlacz and Jafarian have been discussed supra.

Jafarian teaches the use and effectiveness of a rat monoclonal antibody.

The combined references do not teach antibody fragments, including $F(ab')_2$.

The '766 patent teaches that the use of immunologically reactive fragments of polyclonal or monoclonal antibodies, such as the Fab, Fab', or $F(ab')_2$ fragments is preferable in a therapeutic context because these fragments are generally less immunogenic than the whole immunoglobulin (column 12, lines 8-17 in particular).

It would have been prima facie obvious to a person having ordinary skill in the art at the time the invention was made to substitute antibody fragments for the intact anti-substance P antibodies taught by Jafarian. One would have been motivated to combine the teachings with a reasonable expectation of success by the well-known principle in the art, as demonstrated by the '766 patent, that antibody fragments are less immunogenic than whole molecule antibodies and are therefore better tolerated by the subject.

5. Claims 1-3, 5, 13, 14, 19-21, 23, 31, 32 and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudlacz et al (Eur. J. Pharmacol. [1994] 270:291-300; U on form PTO-892 mailed 9/22/2004) in view of Jafarian et al (Life Sciences [1995] 57(2):143-153; V on form PTO-892 mailed 9/22/2004) and U.S. Patent No. 6,034,105 to Mendel (B on form PTO-892 mailed herewith).

Kudlacz and Jafarian have been discussed supra. These combined references do not teach intraperitoneal administration of anti-tachykinin antibodies.

Substance P is a tachykinin. The '105 patent teaches that tacykinin antagonists can be administered via an intraperitoneal route and can be formulated in dosage forms appropriate for administration (column 32, lines 43-50 in particular).

It would have been prima facie obvious to a person having ordinary skill in the art at the time the invention was made to administer the anti-Substance P antibodies for treatment as taught by the combination of Kudlacz and Jafarian via an intraperitoneal route as taught by the '105 patent for tachykinin antagonists. One would have been motivated to combine the teachings with a reasonable expectation of success by the knowledge that Substance P is a tachykinin and the teaching of the '105 patent that tachykinin antagonists can be effectively administered via an intraperitoneal route.

Conclusion

6. No claim is allowed.

David A Saunders

DAVID SAUNDERS
PRIMARY EXAMINER
ART UNIT ~~182~~ 1644

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Pierre VanderVegt whose telephone number is (571) 272-0852. The examiner can normally be reached on M-Th 6:30-4:00; Alternate Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

F. Pierre VanderVegt, Ph.D.
Patent Examiner
March 23, 2005